

Knowledge Discovery Apparatus and Method

Abstract

The invented apparatus performs "knowledge discovery "by extracting both specifically desired as well as pertinent and relevant information to query from a corpus of multiple elements that can be structured (elements are ordered according to some schema that defines type of element and length of element), unstructured (elements are undefined as to type and length and usually embedded in a document), and/or semi-structured, along with imagery, video, speech, and other forms of data representation, to generate a set of outputs with a confidence metric applied to the match of the output against the query. The invented apparatus includes a multi-level (typically embodying Level 1 through Level 5, but nothing in the apparatus limits the multiple levels to 5) architecture, with an optional Level 0, along with one or more feedback loop(s) (Level 6) from any Level N to any lower Level (where $N \geq 2$), whereby the output of the lower Level can be controlled, along with a Level 7 utility function which governs the operation of the Level 6 feedback loop so that a user can control the output

of this knowledge discovery method via providing inputs to the utility function.